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PIERCE

MANAGEMENT OF OFF-ROAD VEHICLES IN THE UPPER TELLICO RIVER AREA

SOUTHERN REGION (R-8)
NANTAHALA NATIONAL FOREST
TUSQUITEE RANGER DISTRICT

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This paper was written to satisfy partial requirements for completion of Clemson University's Outdoor Recreation for Professional Managers Shortcourse and does not necessarily reflect the U.S. Forest Service Policy.

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ABSTRACT

Unmanaged off-road vehicle traffic is damaging National Forest Resources in Western North Carolina. A passive approach by many land managers has contributed to unchecked growth of this sport. Users have utilized whatever road or trail conditions that existed when they visited an area. This has led to varying degrees of recreational experiences for users, but with mounting resentment by managers and environmentalists.

An approach using consensus management to gain user ideas and support coupled with volunteer efforts can be utilized to improve the recreation experience of off-road vehicle enthusiasts.

Others who might find this report useful: District Rangers and Ranger District Recreation Assistants.

Key Words: Consensus, Off-Road Vehicle (ORV) Conflicts, Desirable Recreation Experience

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INTRODUCTION

"Having Fun" in the National Forest takes on a variety of faces. The Forest Service has long provided the needed space and managed the environment for hunting, fishing, swimming, camping, hiking and many other long established leisure time activities.

Now, new activities are emerging as potentially major recreational pastimes. Continued technological advances and more affordable prices have placed many varieties of off-road vehicles (motorcycles, all-terrain vehicles, mountain buggies, and four-wheel drive vehicles) within the range of the average American. While the number of off-road vehicles and enthusiasts has grown significantly, the available space to use them has decreased.

Under the direction of the Chief of the Forest Service we are to manage the use of these vehicles in the National Forest. The goal and challenge is to provide a variety of recreational experiences that are in harmony with the existing environment.

The Tusquitee Ranger District is involved in the development of a dispersed recreation program for 9,200 acres of newly acquired land along the Northern boundary of Cherokee County. The management of off-road vehicles (ORV's) in the Tellico River Area is critical to the success of such a program.

I. ISSUES, CONCERNS, OPPORTUNITIES

It is quickly apparent from contacts with visitors that a wide variety of people are using the Tellico River Area for many different reasons. Utilizing the growing desire of forest users to have more voice in public land management decisions, a citizens task force was assembled which represented the major uses of the area. The selection of the members was primarily from the leadership of known user groups such as ORV clubs, homeowners associations, sportsmen's clubs, and the Forest Service. The wide diversity of issues, concerns and opportunities as suggested by this group is displayed in Appendix B.

The achievement of group concensus happened only through the passage of time as trust and understanding accumulated. The first meeting resulted from an invitation by the Forest Service to a number of persons selected from a list of know users. An attempt was made to invite two active participants to represent each type of major use in the area (i.e. hunting, motorcycling, fishing, hiking, private land owners adjoining National Forest, ATV user, four-wheel drive vehicle user).

Each member brought his own (unwritten) agenda complete with defensive arguments and a want list. By the second meeting, participants were on a first-name basis and beginning to listen to the others present. The facilitator (Forest Service) continued to involve each person and to solicit a cooperative spirit. Some of the more productive sessions were the lunch break discussions or meetings with a few members on site during the inventory stage.

The issues, concerns, and opportunities were obtained from many person's personal observations, comments by users, input from the task force, and from letters soliciting input. Directed by facilitator, the task force group first listed all their known issues, concerns, and opportunities. Others were listed as input was received from other sources. Similar ideas were grouped under categories and then consolidated into a broader more inclusive statement when possible. Each issue or concern was discussed by the task force. Each person then chose the top five to seven issues or concerns and marked their choices. The issues or concerns were then addressed in the order of this ranking done by the group. All issues were considered but more time was spent on the top items chosen by the group.

As each issue was discussed, each idea was listed so each person's comment was recorded in simplified fashion.

Through consensus selection the group chose the items which are displayed in Appendix B. Each alternative was formulated with this list of issues, concerns and opportunities as the driving force. All proposed actions were checked back against these to insure all were being considered.

As the process was ongoing many on-site visits and conversations around camp fires or leaning on the hoods of vehicles were used to gain more information and understanding of both the area and its users.

Improving the recreational experience and protecting the resources were central concerns of the group. The use of off-road vehicles to gain access to the area was a common thread linking most visitors to the area. All members of the citizens group identified management of off-road vehicles as a necessary action to prevent further resource damage; to improve water quality; to improve the recreational experience of the users; and to limit conflicts and impacts on other types of uses and users.

II. EVALUATION CRITERIA

The Citizens Task Force identified a set of preliminary criteria to be used in arriving at the best alternative. The alternative selected for implementation should:

A. Best meet management goals for the area.

--Promote user enjoyment.
--Minimize conflicts between off-road vehicle use and other existing or proposed uses on the same or neighboring public lands and ensure the compatibility of such uses with existing conditions in populated areas, taking into account noise and other factors of the human environment.
--Promote the safety of all users of the public lands.
--Provide as wide a range of opportunities for off-road vehicle use as is possible, exclusive of purely challenging driving experiences.
--Recognize the difference between various types of off-road vehicles and the impacts which they may have on the various resources, public safety, and conflicts with other forest visitors.

B. Result in the most favorable or least adverse environmental effects (physical, biological, social, and economic).
--Minimize damage to soil, watershed, vegetation, or other natural, cultural, and historic resources of the public lands.
--Minimize harassment of wildlife or significant disruption of wildlife habitats.
--Consider local standards for air, noise, and other factors not specifically addressed in the mandatory criteria described above.

C. Be consistent with the management objectives for the National Forest within which the areas and trails are located.

D. Be cost effective.

E. Be feasible (practical from the standpoint of costs, laws, regulations, public acceptance, etc.)

III. INFORMATION, DATA, INVENTORIES, STUDIES

A. Area Description

The Tusquitee Ranger District is located in the mountains of Western North Carolina and is a part of the Nantahala National Forest. This 161,000 acre District ranges in elevation from 1,200 feet to the 5,499 foot Standing Indian Mountain. Headquarters of the Ranger District are at Murphy, N.C.

The Upper Tellico River area of the Tusquitee Ranger District consists of 8,000 acres lying within the Nantahala National Forest next to the North Carolina - Tennessee state line. Almost the entire headwaters of the Tellico River is within this tract. Included are numerous tributary creeks and branches; all are excellent trout streams. The property contains excellent habitat for black bear, wild boar, turkey, and other wildlife species.

The terrain over most of the tract is very steep. Elevations on this tract range from 2,400 feet at the base to 4,640 feet at the highest point. Vegetation is typical of that found in most Southern Appalachian Forest. The mixed hardwood forest consists of red oak, white oak, and hickory on the ridge tops and upper north facing slopes. Lower slopes and flats have stands of yellow poplar and associated species.

Access to the property from Murphy is via 6.5 miles of paved state road, 2.5 miles of gravel state road and 1.0 miles of woods road. From Tellico Plains, Tennessee, the property is reached via about 20 miles of paved Forest Service road. Interior access consists of more than 60 miles of logging and jeep roads. No public roads cross the property. (See Appendix A).

The Upper Tellico River Area receives heavy ORV use due to its close proximity to the Murphy and Knoxville area of which both have large numbers of ORV clubs. Recreational uses include off-road vehicle users, hunters, fishermen, horseback riders, hikers, and campers. Off-road vehicle use is very high during the spring, summer, and fall. Since this area is some of the best trout fishing in Western North Carolina, ORV's cause extensive damage due to sediment problems in the streams.

B. Information About the User and Vehicle

Off-road vehicles (ORV's) are as different as the users themselves. There are four basic types of vehicles which will be referred to in this report; motorcycles, mountain buggies (or mountain rail vehicles), all-terrain vehicles (three-wheel and four-wheel vehicles under 50 inches in width), and full size four-wheel drive vehicles. Each of these ORV's is different from the other in the type of recreational experience desired. One such experience is the challenge of vehicle against obstacle and/or vehicle against vehicle. Other experiences include social trail riding (involving two or more people and/or vehicles), individual achievement, competition, or training.

The uses of these vehicles are also very different. The first type of use is for the one who uses his vehicle as a means to do some other type of recreation, such as hiking, hunting, or camping.

The second type of use is for the enthusiast who uses the vehicle as the primary source of recreation. This person selects a place to 'go riding'. This may involve a few hours or several days. This person may be more concerned with level of trail difficulty (easy, more difficult, most difficult) than scenery or presence of wildlife.

The third type of use involves special competitive events such as time trials, enduros, or large group gatherings. The experience of highly competitive events usually involves higher speeds or more difficult trail

challenges. This is what is referred to as 'high challenges' which are grades that exceed 40% or where terrain features make travel very difficult even for experienced riders. These experiences should be sought for on private or other lands.

A Council on Environmental Quality (1979) report by Sheridan and Carroll well states the case concerning ORV's. 'Growth of a phenomenon' is how Sheridan and Carroll describe the incredible development and production of off-road vehicles. Their studies reveal that greater than 50% of all off-road veicle use takes place on federal lands. In an American Motorcycle Association pamphlet, Facts About Trail Riders, motorcyclists reported that 31.1 percent of off-road riders in the East do most of their riding on National Forests. Sheridan and Carroll also found that per capita ownership of ORV's is significantly higher in areas where more public land is available.

In North Carolina, figures compiled for the year 1985 by the American Motorcycle Association indicates that 90,000 ORV's (under fifty inches in width) were used off the roads. This represents 1.4 motorcycle ATV type vehicles per 100 people of population across the state. In the four counties immediately surrounding the Tellico River Area, Cherokee and Graham County, North Carolina and Monroe and Polk County, Tennessee the ownership of ORV's approaches 16 vehicles per 100 population which equates to about 10,176 resident off-road users. Other contacts with clubs yield data that enthusiasts travel from at least four other southern states and three northern states to jar their bones and exercise their muscles, vehicles, and personal endurance in the Tellico River Area. An article in 4-Wheel and Off-Road (April, 1986) by Campbell and Farquhar describes the 12th annual Smokey Mountain Trek (Tellico River Area) which generally draws sixty or more out-of-state entries. The event is sponsored by the Great Lakes Four-Wheel Drive Association, Ann Arbor, Michigan.

Figures from 1985 Recreation Inventory Management (RIM) data reflect 12,000 visitor days of motorcyle and ATV use in Cherokee County, North Carolina. This does not include hunting, fishing, and other uses which use an off-road vehicle for access purposes. This is estimated to be an additional 18,000 visitor days of use. Studies by Ian Brotherton in the Journal of Environmental Management show that most people, up to 75 percent, return to places they have visited and used before.

According to the Motorcycle Industry Council the average trail rider is male, unmarried, a high school graduate, has ridden for ten or more years, and has a household income of between $20,000 and $35,000. The typical American Motorcyle Association (AMA) member will pay in excess of $2,700 for his next trail bike. This figure is about the same for all-terrain vehicles (ATV's). Four-wheeling enthusiasts will generally pay between $3,000 and $24,000 for their vehicles. Special accessories may add an additional $5,000 to this price tag. The sport is expensive.

C. The History of the Area

In private timber company ownership the Tellico River Area was logged extensively beginning in 1950 to 1969 using diameter limit (thirteen inches dbh and above) tree selection. Numerous skid roads were constructed even on slopes approaching 30 percent. Skidding in streams also occurred resulting in heavy sedimentation. Over time some of the old abandoned skid roads were healed by nature. Other skid roads and trails began to be used by outdoorsmen and early ORV enthusiasts following acquisition by the United States. In 1980 inventories revealed more than sixty miles of active ORV roads existed in a twelve square mile area. Many of these were deeply rutted and few had any drainage structures. Maintenance, if any was ever performed, ceased as logging ceased in 1969. Campbell and Farquhar in 4-Wheel anf Off-Road Magazine described some of the trails as follows; 'Many of the trails lead to dead ends, while others became tangled mazes that can be confusing, frustrating, and time consuming.' In another place they described the same area as '... a trail riders heaven, a place flush with wild flowers and webbed by a network of rugged paths that would defy all but the best drivers.' (Appendix F)

ORV conflicts with nearby private land owners were increasing in 1985 as were conflicts between other sportsmen and ORV users. Lack of common courtesy and noise are the most often cited reasons for many of the conflicts.

Environmental damage in the forms of rutting, compaction, and erosion on old roads which have resulted in sedimentation of streams is the largest problem found. Other forms of damage such as vegetation damage and pollution through littering and fuel leakage were also found.

Use of the Tellico River Area by ORV's has increased significantly because of several factors; remoteness, existing roads and trails, scenic qualities, presence of native game and fish populations, public land, but most of all by default. Other public and private lands have gradually been closed or greatly restricted which has concentrated use on the remaining open areas.

D. Method

This project began by summarizing and displaying information gained from a selected citizen's task force composed of sixteen people (including Forest Service persons). The citizens group met for eight sessions; each session being about six hours in length to provide much of the information, ideas, and direction contained in this report. The negotiation process used during planning was the group concensus method.

The components of the group consensus method are:

1. All participants have the opportunity to provide input (whether exercised or not)
2. All feel they have the chance to provide input.
3. All have the opportunity to explain the meaning of their input.
4. All feel they have been heard.
5. All can 'live with' the outcome of the process.

For framework the National Environmental Planning Act (NEPA) format was used from the Forest Service Manual, Section 1950.

The use of group consensus was selected as the primary conflict resolution avenue due to past experience with natural resource issues. Very much in line with the findings of Christopher Moore, Public Participation Handbook 1982, Part V, the issues were complex and multiple, the facts were sometimes contradictory, and long range effects were uncertain.

The conditions for negotiation which governed and molded the group together were: 1) A sense of urgency or deadline; 2) Interdependence; 3) Issues that were truly negotiable; 4) The area of conflict was manageable; 5) All negotiations were voluntary; 6) The groups recommendations would be submitted with the support of the District Ranger. Each member knew some action was imminent and that by negotiation one might obtain 'a bigger piece of the pie.'

The first meeting was little more than an ice breaker. The only substantive resolution was to agree on a very informal cooperative problem solving approach. The model used for this stage is shown in Appendix G. The NEPA format for documents fit this situation well and served to give the group greater insight into governmental decision making tools. This concept of using conflict resolution by consensus using the NEPA format will not be addressed further in this paper but it holds much potential for development at another time.

Time was spent in the use area over a two year period to observe use, periods of use, and environmental concerns. Many specialists from the Forest Service visited the area to discuss the areas potential and needs.

Contacts were made with other groups and agencies to extract information needed in analysis and evaluation of alternatives. Agencies or groups contacted were:

North Carolina Wildlife Resources Commission
Trout Unlimited, Cherokee County Chapter
Tipton Creek Homeowners Association
Cherokee County, North Carolina Chamber of Commerce
North Carolina Department of Natural Resources and Community Development
Great Lakes 4-Wheel Drive Association
Tennessee Volunteer Riders (Motorcycle Club)
American Motorcycle Association
Monroe County, Tennessee Chamber of Commerce
Cherokee County Streamwatch
Western North Carolina Alliance
Cherokee County Commissioners
Monroe County Commissioners
Smokey Mountain Jeep Club
Stateline Ridge Runners (Mountain Buggy Club)

All trails were inventoried by degree of erosion present and level of difficulty for four wheel vehicle or motorcycle use as applicable.

Forest Service and State of North Carolina specialists were asked to supply information on environmental effects and consequences in a narrative and tabular display (Appendix D) for consideration by the citizen's task force.

IV. ANALYSIS

A. Demand

This report will only lightly address demand. Information from the North Carolina Outdoors Plan (Statewide Comprehensive Outdoor Recreation Plan, SCORP) was inadequate to accurately assess the demand for this highly natural resource oriented recreation pursuit. All types of dispersed recreation were addressed in the SCORP demand formula with no percentage breakdown by type of use.

Some similarities might be identified using the Turkey Bay ORV area in Land Between the Lakes, Kentucky. In a 1975-76 survey 16,007 annual visitors were counted of which 6,263 visits were ORV enthusiasts reports Douglas McEwen in a paper 'Turkey Bay Off Road Vehicle Area at Land Between the Lakes: An Example of New Opportunities for Managers and Riders'. Based on use data and figures on ORV ownership in a four county surrounding area there are 11,232 ORV type vehicles in this combined population of 70,179 people. AMA figures indicate 31 percent of their members use National Forest lands. If this were true in this area 3,482 ORV type vehicles would use the National Forest.

Reports indicate that most recreational users return to areas they know. The assumption is made from personal observation that users normally visit the area an average of two visits each year and generally stay an average of 12 hours (one recreational visitor day). This would equate to 6,964 annual visits or 6,964 RVD's of use.

B. Supply

Using the SCORP report, North Carolina Outdoors the supply of ORV roads and trails in the Tellico River system would be 28,226 visits annually.

Total Annual Demand	6,964 annual visits
Total Annual Supply	-28,226 annual visits
Net Annual Demand	21,262 annual visits unused

Given the environmental conditions and limitations present, this figure is too high for sustained ORV use. Even so the figures indicate that sufficient supply is present to meet the demand.

C. Economic

Revenues - This is no direct revenue to the Forest Service from ORV use. There is a direct revenue to local towns and communities through tourism. The exact amount of additional revenue from ORV users would be difficult to assess. Estimates from the Monroe County Chamber of Commerce indicates the average revenue increase for Tellico Plains, Tennessee, a nearby town, to be in excess $3,000 per week during the period May through August. Another period of use in November and December during hunting season brings increased revenues of $1,200 per week and $500 per week respectively. This results in a total revenue increase of about $62,400 annually for one of the surrounding towns. Cherokee County Chamber of Commerce Director, Dot Mason, estimates a figure of about $800 per week for the same period of increased tourism revenue for a total annual increase of about $16,800. The only conclusion to be drawn from this is that the ORV use in the Tellico River Area has a slightly beneficial effect to the service oriented business economy locally.

Costs - A fully integrated implementation schedule with costs is shown in Appendix E. Only the costs involved with administration, construction, and maintenance of the ORV system will be discussed here. To provide the system needed to improve the recreational experience costs were broken into five areas: trail signing, trail head facilities, trail construction, trail maintenance, and information services.

The cost of proper signing is calculated on personal knowledge of the area. Flexible fiberglass posts with information decals are to be placed each one quarter mile of distance and at each intersection of roads or trails. On the average six signs per mile are needed. Estimates from past experience is that vandalism will damage one sign per mile requiring replacement to maintain well marked trails for improved recreational experience. Due to rough terrain and travel time, production is estimated at one mile of signing per hour. The cost of initial signing was calculated to be $2,134. Annual maintenance and replacement cost is $450.

The construction of a trail head parking facility (60 feet by 90 feet) for vehicles with trailers is estimated to be $2,077. This would include eight hours of dozer with operator time at a rate of $44.00 per hour to doze the area and spread the gravel. To surface the parking lot 230 tons of ABC grade gravel at $7.50/ton would be required. Construction of a warm-up trail 600 feet in length would cost approximately $450. An information bulletin board installed would cost an estimated $297. Two such trail heads are needed, one at Allen Gap and one near the confluence of Tipton Creek and Tellico River.

Construction of 3.5 miles of ATV trail under 50 inches in width is calculated to be $6,750. An additional twelve miles of ORV route is needed staged over a three year period to complete segments to create more loop roads and trails. The estimated cost of this is $30,000.

The cost of administering the system including information and contact persons (initial year) and law enforcement support is $2,986.

These figures are displayed in a proposed ten year implementation schedule in Appendix E.

The cost of information boards is $297 each. Production of an inexpensive map for the area is estimated at $1500.

V. ALTERNATIVES

Five alternatives were considered, and one, the no action alternative (A) was discarded after a brief analysis. The no action alternative, defined as no change in present management which involved no management, did not offer acceptable solutions to issues and concerns.

The alternatives considered were:

B. Low Opportunities/Low Development/Natural Setting

Little or no modification of the area. Management would be characterized by low opportunities in most resource activities, limited and sometime difficult access and a roaded natural setting and rugged experience level.

A lack of developed facilities would be emphasized. Twelve to twenty-nine miles of designated ORV roading of a rough and rugged nature would be identified. A fifteen mile section of the Bartram Trail would be planned to cross the area with few trail head facilities.

Timber management would occur at low levels, four to eight million board feet (MBF) over the present ten year cutting cycle. Wildlife habitat work would be minimal due to low timber harvesting.

Rehabilitation of damaged areas would be accomplished over a five year concentrated volunteer and government effort.

Minerals and/or gas and oil exploration and development could occur in a manner consistent with the natural setting/low opportunities theme.

C. Moderate Opportunities/Limited Development/Natural Setting

Some improvement of access may occur; construction of two to four concentrated use sites involving one to three acres, and construction of

fifteen miles of Bartram Trail along the river corridor and one to three miles of other interior trails would be neeeded to accommodate and encourage moderate use.

Timber harvesting would be increased to a level of nine to thirteen million board feet over a ten year period. This level of harvesting would provide for more wildlife habitat improvement than Alternative A. Recreation experience would be less primitive than in Alternative A due to more visitors in the area. Along with better access, thirty to forty-five miles of off-road vehicle roading would be retained and managed.

Minerals, oil, and gas development would be considered on a case by case assessment with stipulations for protection of other resources at a level commensurate with the management theme.

D. Moderate/High Opportunities/Moderate Development/Modified Setting

Access would be made easy enough for most families to visit and use the area. Increased use would involve two to six concentrated use areas with hardened sites, sanitation, litter, and parking accommo- dations to lessen the adverse impacts of heavy use. The amount of ORV roading would be increased to 46-58 miles of rough, rugged designated road. The trails program would consist of fifteen miles of Bartram Trail and three to ten miles of interior trails with two to three trailhead facilities.

Timber harvesting would be increased to 14 - 20 million board feet over the ten year period. Wildlife habitat diversity would be increased by two hundred to three hundred acres of vegetative manipulation. The setting and experience in the area would be modified with higher standard roads, more traffic, increased harvesting and possibly other supportive programs such as stocking fish.

E. Closure of the Area

Access points would be blocked to vehicular traffic for a five year period. Less severe erosion problem areas would be allowed to heal over time. Severe erosion areas would be treated and returned to productivity for plants and wildlife. Timber management activities would be postponed during the closure. Recreational use would be in the form of non-motorized camping, hunting, fishing, hiking, and horse riding.

Wildlife habitat management would continue at low levels. Information and enforcement would be significant efforts in management.

VI. EVALUATION OF ALTERNATIVES

Each alternative is discussed in terms of the physical, biological, social, and economic effects of the management proposed.

A. No Action/Current Management

The area has a natural setting with some modification in the form of roads. The effects on the visual resource of continuing this current action are that no new disturbance from road construction or timber harvesting would occur. Unsightly damage to soils and vegetation would remain. Several forms of dispersed recreation, ORV use, hiking, hunting, fishing, and camping would continue to occur. Varying degrees of recreational experiences would be available. Confusion due to unmarked travelways and conflicts with other users could adversely affect the recreationl experience. Wildlife population would probably remain generally low. Current management would be considered adverse to wildlife since no habitat management is occurring to restore or increase population. Unmanaged ORV traffic over a maze of roads is detrimental to wildlife and fisheries habitat and populations. Management and enforcement would remain very difficult with little direction for visitors, unclear goals, and lack of perceived jurisdiction. Noise, environmental damage, conflicts, potential cultural resource damage, poor access, sedimentation of streams, and unrestricted use would continue to occur.

B. Low Opportunities/Low Development/Natural Setting

The natural setting with limited modification remains a positive factor. The visual resource would be enhanced as eroded areas are revegetated. Recreation, wildlife, and aesthetic opportunities would be enhanced with well managed cutting at lower harvesting levels.

Cutting to enhance other resources is a positive factor. Reduced timber yields are insignificant at this time due to the fact that the area was previously unmanaged by Forest Service and most of the timber stands are young and understocked. The off-road vehicle experience would be improved by signing and management. Designation of routes with consideration for all resources would allow much of the variety needed for a desirable experience. Costs to the agency would be lowered without construction of more costly developments.

The following statements apply to Alternatives B, C, and D. Use of the designated trails and roads only for ORV's would significantly lower environmental damage and allow severely disturbed areas to be revegetated. Vehicle use on sensitive soils and riparian areas causes rutting, compaction, and erosion. As mitigation, use in these areas would be reduced or eliminated wherever possible. In some cases other measures such as bridging, armoring, graveling, and proper drainage will lessen the effects. Soil productivity loss on eroded areas has already occurred but is reversible over time. Commitment of natural resources to transportation systems such as this ORV system causes irretrievable loss of vegetative production. There will be some adverse effect on certain wildlife species. The degree to which wildlife is disturbed is uncertain and controversial. Noise is an adverse effect which can be mitigated by proper enforcement of standards.

C. Moderate Level of Opportunities/Limited Development/Natural Setting

There are offsetting actions which would occur. Generally, while eroded areas and gullied roads would be treated, new road construction would yield at least short-term effects which would be considered slightly adverse. Recreation opportunities would both change and increase. Increased access for vehicles with increased management offers more opportunities for visitors, but a lessening of the more natural setting. There would be adequate opportunities for wildlife habitat improvements along with offsetting problems with more vehicle traffic and hunter pressure.

D. Moderate to High Opportunities/Moderate Development/Modified Setting

Many management activities would have adverse effects on visual and recreation opportunities. High levels of roading and harvesting would adversely affect the types of natural environment so necessary for a desirable experience. ORV use would be significantly reduced due to higher standard roads replacing ORV travelways. Access would be significantly improved which would allow a large increase in the number of users. Some wildlife and fish species such as bear, turkey, and native brook trout would be adversely affected in this alternative. Cultural resources, if present, would be more likely adversely affected.

E. Closure of the Area to Motorized Travel

The visual resource would be improved if restoration of roads and eroded areas were accomplished. Recreational experience and opportunities for most visitors would be adversely affected by this management. Lack of access in this rough terrain would significantly reduce the ORV use, camping, and hunting. Wildlife populations would greatly benefit from elimination of vehicles even though habitat improvement would be low without some amount of timber harvesting. Cultural resources, if any are present, would be best protected by total closure. Elimination of noise, soil disturbance, and vegetative disturbance would also be beneficial.

Management options would be lessened and activities such as minerals exploration, timber harvesting, and public access would be adversely affected during the time of closure.

VII. PREFERRED ALTERNATIVE

In the analysis several facts became clear. Funding for recreation development looked highly unlikely. Also the remote conditions, poor access, and lack of native brook trout streams remaining undisturbed and the retention of semi-primitive motorized recreation experience were highly favored by public input. In Alternative B, the area could be managed for semi-primitive motorized and non-motorized recreation, trout streams maintained as high quality native streams, and environmental damage corrected. This alternative provided the best mix of goods, services, and resolution of issues.

A. Low Opportunities/Low Development/Natural Setting

Management would be characterized by low opportunities in most resource activities, limited and sometimes difficult access, and a roaded natural setting and experience level. Experience level would be directed toward a more rugged opportunity. Opportunities would exist for motorized and non-motorized forms of recreation.

Opportunities for recreational activities would be low. No additional use would be encouraged. a lack of development would be emphasized. Fifteen miles of trail, the Bartram Trail, would be constructed along the river corridor and state line.

Twelve to twenty-nine miles of existing road would be maintained for vehicular use of a rough, rugged, four wheel nature with provision for environmental protection primarily through adequate drainage. Higher standards of roads would be managed as open and/or closed as needed to meet the objectives set forth by management direction. Seasonal closures of routes may be used to protect resources or provide for rotation of use.

Timber management would occur at low levels, four to eight million board feet of timber over a ten year period. Cutting would be supportive of other management activities and compatible with recreation and wildlife opportunities. Timber roading would be minimal and at the lowest standard to facilitate low harvesting levels. Management would favor older tree ages and mid to late successional stages of vegetation.

Wildlife habitat improvement would be low being dependent on the level of timber cutting. Wildlife such as bear, turkey, and squirrel would be favored by conditions and vegetation associated with older stands.

Fish habitat improvement would be limited to the improvement of water quality and reduction of sedimentation by erosion control.

Consideration of special use permits on National Forests would be held to the minimum. Management would provide direction for other types of uses such as ORV travelways, hiking trails, and areas of concentrated use to be located away from private lands to limit conflicts.

Rehabilitation of abused and eroded areas would begin immediately using the combined efforts of federal employees and volunteers. A five year concentrated rehabilitation program of work is needed to rectify existing problems.

An archaeological survey would be necessary prior to any project causing site disturbance.

If there is reason to believe the area might contain hardrock minerals and/or oil and gas in commercial quantities exploration and development could occur in a manner consistent with the management theme. Exploration and development would be consistent with and supportive of other management activities and compatible with watershed protection and recreation, wildlife, and timber management opportunities. Roading would be minimal and at the lowest standard to facilitate low development levels. management would favor minimal surface disturbance and maximum protection of the natural setting.

B. Facilities

Indicated in the preferred alternative it was determined that few additional developed facilities are desired except as needed to protect the environment (i.e. stream crossings, hardened trail heads, etc.).

Camping facilities already exist in nearby Tennessee along the Tellico River Road. These facilities are adequate for the next five to ten years. A short 'warm-up trail' may be needed near the Stateline Campground to remove the temptation to warm-up along the campground roads. A trailhead and warm-up area is needed along the Davis Creek Road (#420) access from Murphy, NC (see attached map, Appendix A).

Information boards will be located on each of the two major access points into the use area. These boards will be located at the trailhead making the trail information readily available for users. Other information items will be discussed.

A major part of the facilities are the routes. Under the Forest Supervisor's closure order (see attached Appendix H) the area is closed to ORV use except where signs indicate open. To implement the proper designation of trails, those trails selected as suitable from an earlier screening process will be marked by a flexible fiberglass post located near the intersection of a trail or road. The post will bear decals indicating the number of the road/trail, the type of vehicle allowed, and the difficulty rating. Other special information signs will be used only as necessary.

Stream crossings are numerous in the area. To protect the water quality and fish habitat, structures such as temporary bridges, culverts, fords, or hardened stream crossings using concrete blocks will be necessary.

Drainage of the roads is of major importance to protect the resources, particularly water quality of streams. Broad based dips, road reshaping, culverts, and water bars will be used to limit water movement along roads to very short distances (200 feet or less).

C. Rules and Regulations

As mentioned earlier, the area has a restricted use classification for off-road vehicles. A Forest Supervisor's closure order and the National Forest in North Carolina Forest Plan designate that the forest is closed to off-road vehicle use except where signed open. Other items of special attention are as follows:

1) Use of an ORV without a vehicle license tag is allowed on the designated routes shown on the attached map. Unlicensed vehicles are not allowed on other system roads on the district.

2) Each operator must have a valid operators license.

3) Noise levels shall not exceed the accepted standard of 99 decibels when measured with a meter held at 20 inches to the rear and slightly to the side of the exhaust of a motorcycle or ATV.

4) Tires with metal studs extending beyond the normal tread are not allowed.

D. Information to the User

The goal of the information provided is not to encourage additional or new use but, to improve the quality of the recreational experience by reducing confusion and conflicts.

Information boards will provide written information and a larger scale map will be posted at each trail head. Additional information will be included in the recreation opportunity guide found at the District Ranger's Office.

E. Implementation

The best plan is worthless until it is put into effect. The implementation of this plan is shown being staged over a ten year period (see attached schedule Appendix E) and coordinated with other resource activities.

The initial strategy was to inventory all existing roads and trails (60 miles) and to eliminate those which were causing significant unavoidable adverse effects (38 miles). The remaining 22 miles of trails were found suitable to begin our desired ORV trail/road system. These trails will need proper signing and drainage. It was recognized that additional trails were needed to create loop trails and to replace the large amount of trails found unsuitable and eliminated. Four segments of trails were identified to be constructed for all ORV loops. An additional 2.5 miles of ATV/motorcycle trail needs to be reconstructed. Another 3.5 miles of new construction of ATV/motorcycle trail is needed to connect this loop trail. Other possible additions are indicated for future work.

Trail construction and maintenance standards from the Trail Management Improvement Program Handbook (June 1985) will be used. Also A Guide to Off-Road Motorcycle Trail Design and Construction by Joe Wernex (1984). Montoring will be accomplished according to manual guidlines with emphasis on pictures and documented monitoring reports.

LITERATURE CITED

American Motorcycle Association, 1983. Facts About Trail Riders, Costa Mesa, CA.

Brotherton, I, 1982. 'Visitor Frequency and Fidelity as Indicators of Rural Recreation'. Journal of Environmental Management, U.K. 15 (2): pp. 101-107.

Campbell, Steve and Farquhar, John D. 4-Wheel and Off-Road, April 1986.

Echelberger, Herbert and Plumley, Harriet. Anatomy of Back Country Management Costs. Northeast Experiment Station, Broomall, PA, N.E. - 575.

Forest Service Manual, 2309.18, (Draft, 1986). Management Direction for Off-Road Vehicle Use, Appalachian Mountain National Forests, Atlanta, GA.

Governor's Commission Report, 1982. N.C. 2000, The Local Report. Raleigh, NC.

McEven, Douglas N., 1978. Turkey Bay Off-Road Vehicle Area at Land Between the Lakes: An Example of New Opportunities for Managers and Riders. Southern Illinois University, Department of Recreation, Research Report No. 1.

Moore, Christopher W., 1982. Natural Resource Conflict Management, Public Participation Handbook (Part V). Romcoe, Center for Environmental Problem Solving, Boulder, CO.

Motorcycle Industry Coucil, 1982. Summary of State Laws Governing Off-Highway Motorcycles, Motorcycle Industry Council, Costa Mesa, CA.

Motorcycle Industry Council, 1985. Public Land and Off-Highway Motorcycle Statistics by State, Costa Mesa, CA.

Sheridan, David, and Carroll, Allen, 1979. Off-Road Vehicles on Public Lands. Council on Environmental Quality, Washington, DC.

Specialty Vehicle Institute of American, Tips for the ATV Rider, Costa Mesa, CA.

Tolhurst, Neil. Trail Riding: Skills, Safety, and Sensibility. American Motorcycle Association, Westerfield, OH, 1982.

Tropman, John E, 1980. Effective Meetings. Improving Group Decision Making. Sage Publications, Beverly Hills, CA.

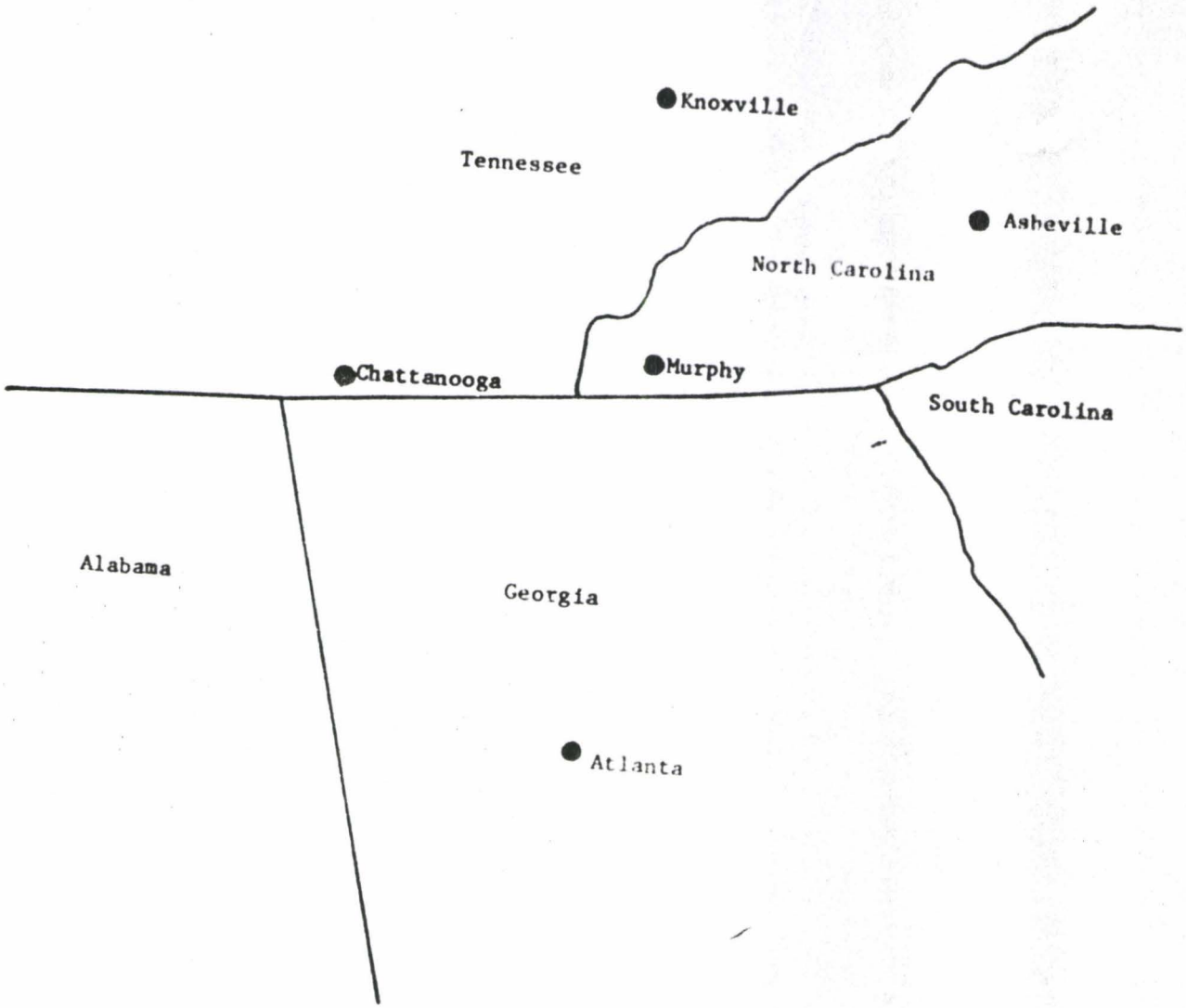
Ulschak, Francis L., Nathanson, Leslie, and Gillan, Peter G., 1981. Small Group Problem Solving. Addison-Wesley Publishing Company.

Wernex, Joe, 1984. A Guide to Off-Road Motorcycle Trail Design and Construction, American Motorcycle Association, Westerville, OH.

APPENDIX

APPENDIX A

VICINITY MAP



SCALE: ONE INCH EQUALS 38 MILES

APPENDIX B

DISPLAY OF GOALS, ISSUES, CONCERNS, OPPORTUNITIES, AND ENVIRONMENTAL FACTORS

GOALS/ISSUES/CONCERNS	MANAGEMENT OPPORTUNITIES	ENVIRONMENTAL/OTHER FACTORS
GOALS:		
-Emphasize wildlife species preferring vegetation associated with older tree ages (middle and late successional stages).	-Wildlife habitat improvement. -Stocking.	-Other agency objectives/programs. -Threatened and endangered species. -Wildlife habitat. -Wildlife population. -Timber Resource.
-Manage for motorized and non-motorized forms of recreation opportunities in a roaded natural setting and experience level.	-Non-motorized recreation. -Motorized recreation.	-Recreation opportunity/resource. -Visual resource. -Transportation facilities. -Water quality. -Soil productivity/capability. -Costs. -Private Property. -Public access.
-Emphasize a moderate level of timber production and associated activities.	-Timber stand improvement. -Timber harvest. -Wildlife habitat improvement.	-Timber resource. -Transportation facilities. -Revenue. -Employment. -Recreation opportunity/resource. -Threatened and endangered species. -Water quality. -Wildlife habitat. -Cultural resource. -Visual resource.
ISSUES/CONCERNS:		
-Wildlife and Fish:		
- - - Illegal hunting/fishing affecting populations.	-Increase law enforcement.	-Law enforcement. -Wildlife/fish population.
- - - ORV use degrading fish habitat.	-Water monitoring. -Road/Trail rehabilitation or improvement. -Erosion control.	-Water quality.

ISSUES/CONCERNS (Cont'd)

- - - Protect threatened and endangered species.		-Threatened and endangered species
- - - Not enough game to provide good hunting.	-Wildlife habitat improvement. -Stocking.	-Wildlife habitat. -Wildlife population.
- - - Protect native brook (speckled) trout.	-Emphasize brook trout management.	-Fish habitat. -Fish population.
- - - Public accessibility affects populations.		-Wildlife/Fish population.
-Recreation:		
- - - Establish desirable types and mix of uses.	-Recreation opportunities.	-Water quality. -Private property. -Wildlife/fish habitat. -Recreation opportunity/resource
- - - Determine desirable level of use/experience.	-Recreation opportunities.	-Water quality. -Private property. -Wildlife/fish habitat. -Recreation opportunity/resource
- - - What support facilities are needed.	-Provide recreation support facilities.	-Public health and safety. -Water quality. -Recreation opportunity/resource
- - - Need for special rules/regulations.	-Law enforcement.	-Public awareness/information. -Law enforcement.
- - - Existing ORV use causing resource damage.	-Erosion control.	-Water quality. -Soil productivity/capability. -Fish habitat.
-Transportation System:		
- - - New or improved roads will reduce ORV opportunities.		-Recreation opportunity/resource

GOALS/ISSUES/CONCERNS - Transportation System (Cont'd)

- - - Need road improved between State-line Campground and Murphy, NC	-Timber markets.	-Revenue. -Timber resource. -Public access.
- - - New or improved roads will increase public use.	-Recreation Opportunity.	-Recreation opportunity/resource -Private property. -Public access.
- - - Existing roads/trails causing resource damage.	-Erosion control.	-Water quality. -Soil productivity/capability.
- - - Private owners maintaining part of existing public road system.		-Costs.
- - - Improved system needed for resource management.	-Timber harvest. -Recreation Opportunity. -Fire Suppression.	-Transportation facilities. -Timber resource. -Public access. -Recreation opportunity/resource -Costs. -Revenue.
- - - Protect proposed Bartram Trail Corridors.		-Recreation opportunity/resource
- - - Some bridges and road sections unsafe for travel.		-Public health and safety.
-Timber:		
- - - Harvest can cause resource damage.		-Soil productivity/capability. -Water quality. -Visual quality. -Cultural Resources.
- - - Harvest can improve Wildlife habitat.	-Improve Wildlife habitat.	-Wildlife habitat.
- - - Protect threatened and endangered species.		-Threatened and endangered species

GOALS/ISSUES/CONCERNS - Timber (Cont'd)

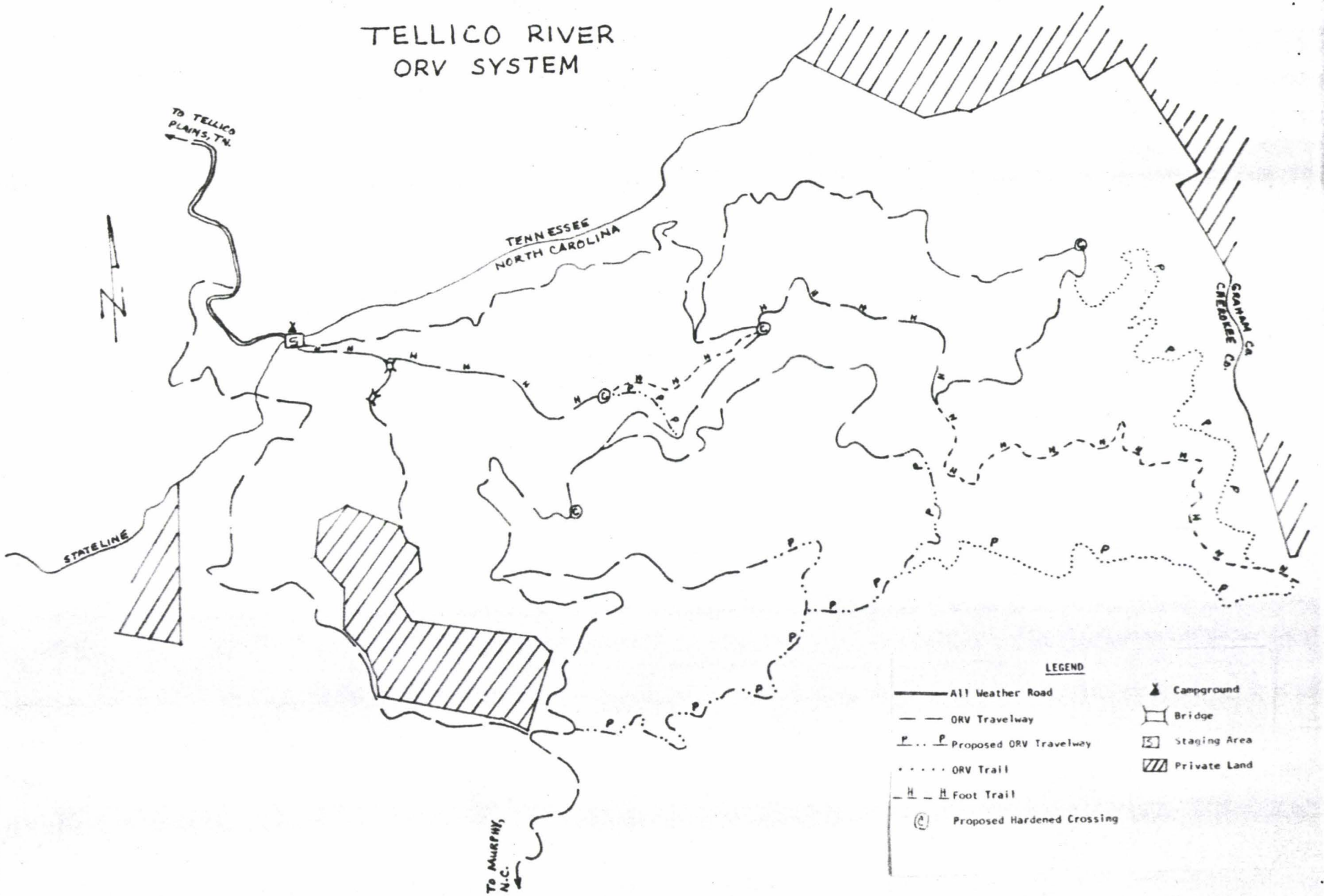
- - - Wood of value to local economy.	-Revenue enhancement. -Employment opportunities. -Economic base.	-Timber resource -Revenue. -Employment. -Economic base.
-Private Lands:		
--- -Owners impacted by vehicle noise, dust, and traffic.		-Public health and safety. -Noise.
- - -Recreationists using private property without Permission.	-Identification of private land.	-Public awareness/information
- - -Protect owners rights to access their property.	-Plan for appropriate access.	-Private property.
-What are impacts on local economy.	-Revenue enhancement. -Employment opportunities. -Economic base.	-Revenue. -Employment. -Economic base.
-What are the costs of management.		-Costs.
-Identify and protect cultural/historic resources.	-Cultural resource protection.	-Cultural Resources.
-Need better public information/awareness program.	-Public awareness/support.	-Public awareness/information.
-Increase F.S./N.C.W.R.C. law enforcement efforts.	-Law enforcement.	-Law enforcement.
-Mining/minerals activities.	-Extraction of minerals.	-Water quality. -Soil Productivity/capability -Visual quality. -Wildlife/fish habitat. -Mineral resource. -Recreation opportunities/resource -Transportation facilities. -Economic base. -Revenue.

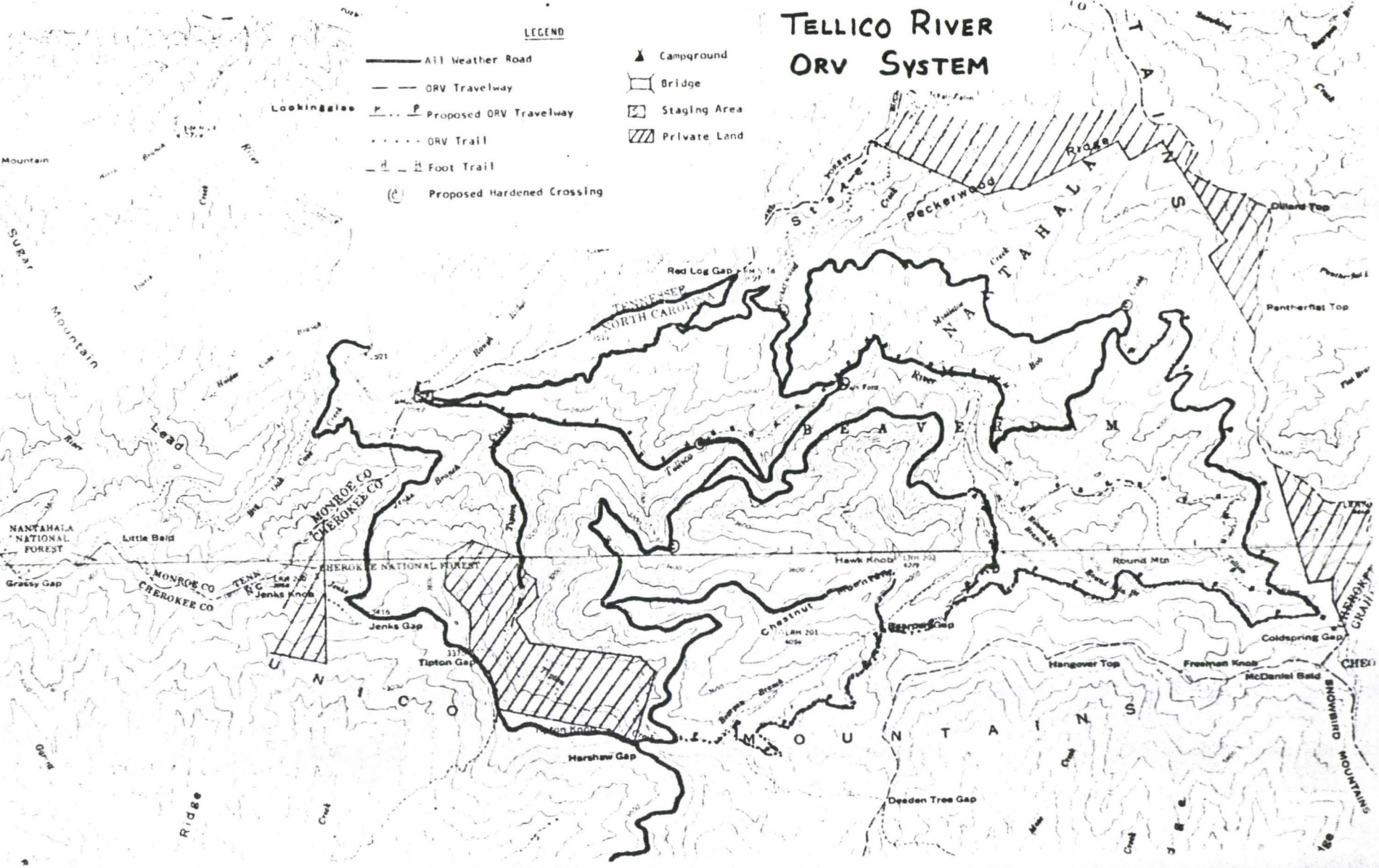
GOALS/ISSUES/CONCERNS (Cont'd)

-Will plans conform with objectives of other agencies, cooperators, etc.	-Other agency objectives/programs.

APPENDIX C

TELLICO RIVER ORV SYSTEM




TELLICO RIVER
ORV SYSTEM
LEGEND
All Weather Road
ORV Travelway
Proposed ORV Travelway
ORV Trail
Foot Trail
Proposed Hardened Crossing
Campground
Bridge
Staging Area
Private Land
NANTAHALA NATIONAL FOREST
CHEROKEE NATIONAL FOREST
TENNESSEE
NORTH CAROLINA
MONROE CO
CHEROKEE CO
Red Log Gap
Little Bald
Grassy Gap
Jenks Knob
Jenks Gap
Tipton Gap
Harshaw Gap
Deadon Tree Gap
Hawk Knob
Round Mtn
Chestnut
Barnes Gap
Coldspring Gap
Hangover Top
Freeman Knob
McDaniel Bald
Pentherfiat Top
Dillard Top
Peckerwood Ridge
Lead Mountain
Lookinglass Mountain
Ridge
BEAVER
UNICOI
MOUNTAINS
SNOWBIRD MOUNTAINS

APPENDIX D

ALTERNATIVE/ENVIRONMENTAL EFFECTS WORKSHEET

ENVIRONMENTAL/OTHER FACTORS →

ALTERNATIVES FOR:

OFF-ROAD VEHICLE MANAGEMENT ↓

ALTERNATIVES	Water Quality	Soil Productivity/Capability	Noise	Cultural Resources	Transportation Facilities	Visual Resource	Wildlife Habitat	Wildlife Population	Fish Habitat	Fish Population	Threatened/Endangered Species	Recreation Opportunity/ Resource	Timber Resource	Minerals Resource	Private Property	Public Health/Safety	Employment	Revenue	Other Agency Objectives/ Programs	*Costs	*Law Enforcement	*Public Awareness/ Information Programs	*Public Access		
A. No Action - Current Management- Close segments causing extreme soil erosion.	0	-H	-H	0	-M	0	-H	-H	-H	-H	N/A	0	+L	0	-H	-H	+	+M	-L	5	5	3	4		
B. Designated routes open to ORV use = 12-29 Miles Low to moderate challenge.	+L	+L	+L	-M	0	-L	+L	+L	+L	0	N/A	+M	+L	+L	+L	+M	0	+L	+M	3	1	3	3		
C. Designated routes open to ORV use = 30-42 Miles Low to difficult challenge.	+L	+L	-L	-H	+M	-H	+L	+L	-H	-H	N/A	-H	-H	+L	-M	+L	+L	+M	-L	2	2	2	2		
D. Designated routes open to ORV use = 43-58 Miles Low to difficult challenge.	+L	+L	-M	-H	+M	-H	-H	-H	-H	-H	N/A	-H	-H	+L	-H	0	+L	+H	-M	1	3	1	1		
E. Close area to ORV use.	+M	+H	+H	+M	-H	+	+H	+H	+H	+H	N/A	0	-L	-L	+H	+H	-M	-H	+M	4	5	1	5		

INSTRUCTIONS: 1. Rank first 19 factors/alternatives as + for favorable effect, -for adverse effect, and 0 for no or insignificant effect. Thus qualify each effect with H for high, M for moderate, or L for low. 2. Rank last 4 factors (*)/alternatives on a scale of 1 to 5 with 1 being highest or most need and 5 lowest or 3. If needed, attach a narrative sheet explaining rankings or providing

APPENDIX E

UPPER TELLICO RIVER

TEN YEAR IMPLEMENTATION SCHEDULE

	FY 86		FY 87		FY 88		FY 89		FY 90		FY 91	FY 92
	UNITS	$	UNITS	$	UNITS	$	UNITS	$	UNITS	$		
ADMINISTRATIVE												
1. Report to working group annual update & feedback on issues and concerns	1 Plan (D)	600		100		X		X		X	X	X
2. Administrative support	(D)	2986		1840		1840		1840		X	X	X
3. Forward recommendations to NCWRC	(SO)											
RECREATION												
4. Locate & mark open routes	22 Mi.	2130										
5. Construct & install entrace information boards and minimal signing	2	594										
6. Rehab one abused dispersed use site	0.3 Ac.	360										
7. Maintain route marking, signing, and information boards				450		450		250		250	X	X
8. Trail maintenance			5 Mi. (D) (V)	1250	6 Mi.	1500			10 Mi. (D) (V)	2500	6 Mi. 1500	
9. Trail construction					2.5 Mi.	10500	1 Mi.	6000				
Trail reconstruction					3.5 Mi.	3,700			3 Mi.	4500		
10. Cleanup/litter removal	(D) (M)	1040		1040		1040		1040		X	X	
Archaeological survey	4 Ac. (D)	650										
ROADS												
11. Complete TAU#	1 (S)											
12. Investigate alternative route around private land	.75 Mi. (S) (D)	380										
13. Road maintenance and drainage	16 Mi.	2900	9 Mi.	1629								
14. Road construction/ Bridge construction-Davis Creek	3.6 Mi.	(SO)										
	2 Bridges	(SO)										
14a. Harden Stream Crossings	2 (D) (V) (S)	2400										

15. Timber road reconst./ construction Archaeological survey				Temp. 2.1 Mi (S) (D) 2 Ac. 350 (S) (D)			
WATERSHED/SOILS							
16. Complete watershed inventory	1 Plan 1100 (D)						
17. Soil & Water rehab. projects (from inventory - item 16)		11 Ac. (D) (V) 13,000	7.5 Ac. (D) (V) 9,000	12.5 Ac. 15,000	10 Ac. 12000	6 Ac. 7200	
18. Preliminary/temporary closure of unacceptable routes.	(D) (V) 980						
19. Special soils survey for anakeesta	(S) (D) 1100			(S) 600			
20. Design & implement water monitoring	1 Plan 1,360 (S)	1,100 (S) (D)	1,100	1,100	X	X	
21. Maintenance of completed rehab projects			11 Ac. 2,500 (D) (V)	18.5 Ac. (D) (V) 3,600	20 Ac. 4,000 (D) (V)	22.5 Ac. (D) (V) 4,400	16 Ac. 3,200 (D) (V)
TIMBER							
22. Mark timber for sale			276 Ac. (D) (C-125)				
23. Timber sale				(C-125) (D)			
24. Site prep/reforestation							80 Ac. (D)
LAW ENFORCEMENT							
25. Prepare and implement contact/partol/enforcement schedule	1 Plan 4,208 (D) (S)	4,028	3,260	3,260	X	X	X
26. Annual coordination with NCWRC local officers and special projects scheduling	(D) 250	X	X	X	X	X	X
WILDLIFE							

LEGEND

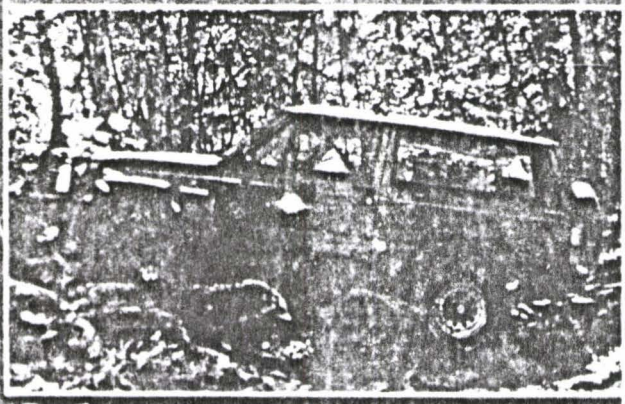
(D) - District Personnel
(V) - Volunteers
(M) - Manpower
(S.O.) - Supervisor's Office
(S) - Specialist
X - Continuing Project

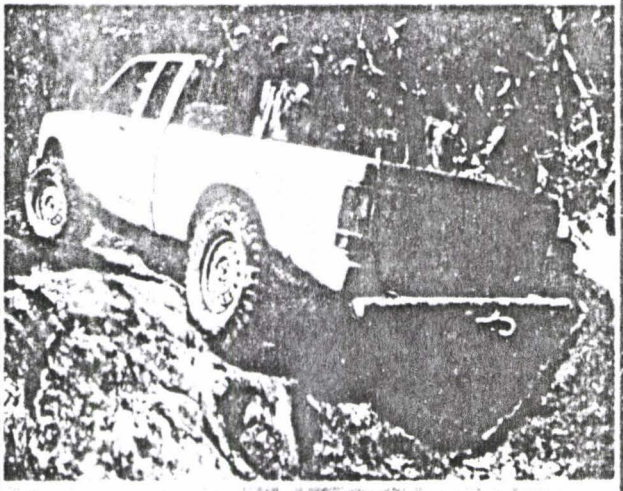
APPENDIX F

Smoky Trek

OFF-ROADING IN THE CHEROKEE NATIONAL FOREST

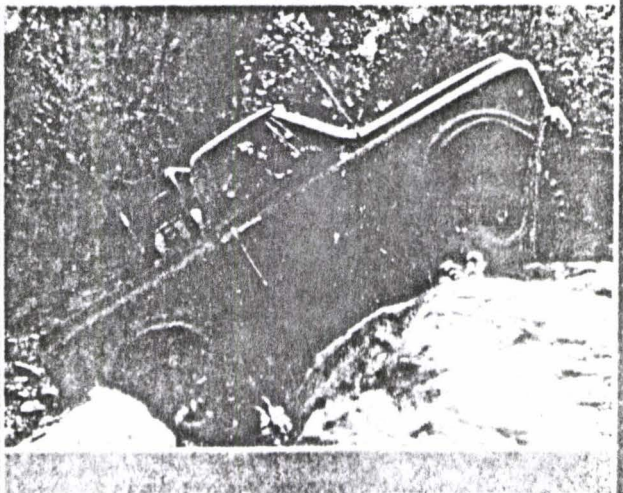
By Steve Campbell & John D. Farquhar



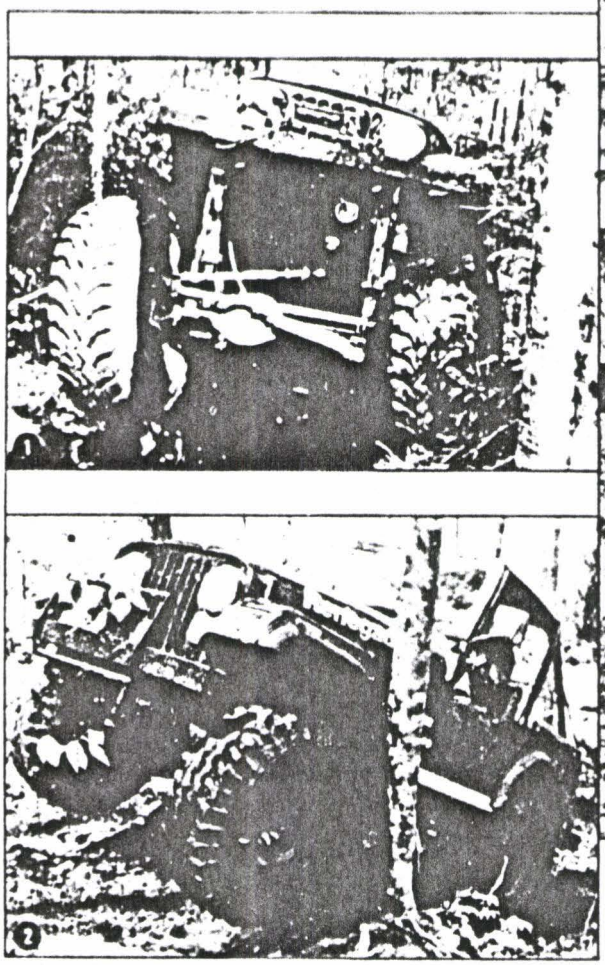


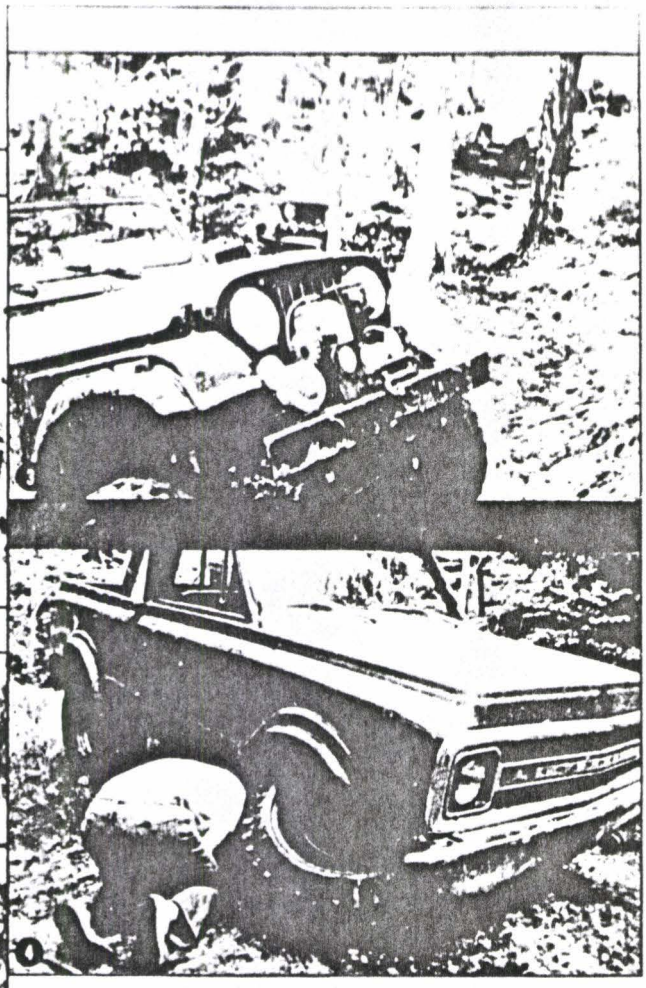
When a small group of Michigan four-wheelers first ventured into the Cherokee National Forest on the Tennessee/North Carolina border 11 years ago, they were astounded by the vast timberlands and supremely challenging terrain. They found deer, wild hogs and other animal life thriving on steep slopes and in ravines. They found outstanding fishing—including trophy-size trout—in the Tellico River that wanders down from the Unicoi Mountains. It was a land burgeoning with valleys and plateaus, rock-filled washouts and trails as tough as the Rubicon. And when they returned home from that area at the western tip of the Great Smoky Mountain chain, they regaled their fellow 4x4 enthusiasts with stories of a trail-rider's heaven, a place flush with wild flowers and webbed by a network of rugged paths that would defy all but the best drivers. It was the beginning of a love affair that has blossomed into a consuming passion, giving birth to an annual pilgrimage known as the Smoky Trek, which takes place the first weekend of May.

Sponsored by the Great Lakes Four Wheel Drive Asso-



PHOTOGRAPHY: JOHN D. & VALERIA FARQUHAR





(continued from page 84)

ciation, the spring event now draws participants from nine states and features a wide range of 4x4s. Through local contacts established over the course of the past decade, the Great Lakes organizers have searched out the best of the Cherokee National Forest trails, and the group's trailmasters—Tom Hoskin and Rick Taepke for the '85 gathering—arrive a full week ahead of time to prepare a base of operations at Spivey Cove Campground and prerun the more rugged sections of the off-road routes.

Each year, five separate trail runs are scheduled for the three-day event. Trip conditions range from easy two-wheel-drive cruises across scenic routes to extremely taxing flogs that invariably take their toll on the machinery. The names of these off-road forays indicate the severity of the challenge. For instance, the two-day Spare Vehicle Run, in which the participants camp out on the trail overnight, hints that the driver shouldn't use the machine he plans to get home in. (In fact, those who wish to partake in the Spare Vehicle Run are encouraged to trailer their vehicles to the base camp, since it is quite possible that major breakage will occur on the trail.) The two Spare Parts Runs—one Saturday and one Sunday—are slightly less demanding, but a good supply of U-joints, oil filters, pulley belts and even items such as axles and driveshafts is recommended. The Spare Tire Run is designed with stock 4x4s in mind, so only an occasional flat is expected, and the Spare Film Run is for those who prefer to limit their driving to easily accessible roads with large doses of outdoor splendor.

Last year's Smoky Trek was affected by a two-day rainstorm earlier in the week, but after some planned trail runs were eliminated due to safety and environmental considerations, the weekend's forays began on schedule. The trailmasters formed the gathering into groups according to vehicle sturdiness and led the participants to the various trail heads.

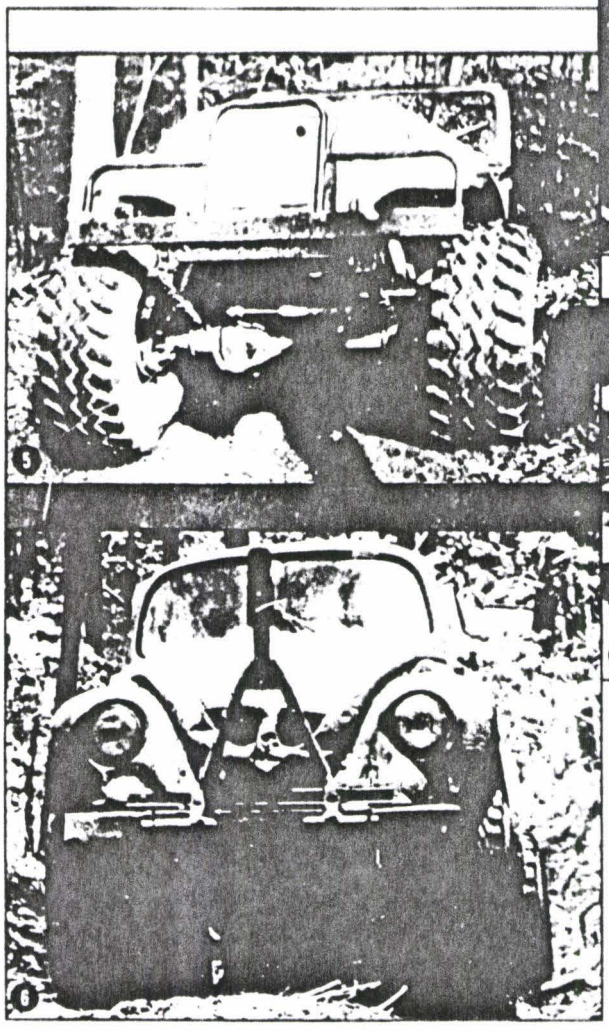
Every trail offers its own unique challenge, running from rough and rocky paths to torturous twists and climbs that exact their toll from vehicles and drivers alike. At the toughest spots, each driver parks his rig after conquering an impediment, then watches the progress of those who follow, helping to string winch lines or simply offering encouragement. When every vehicle makes it past an obsta-

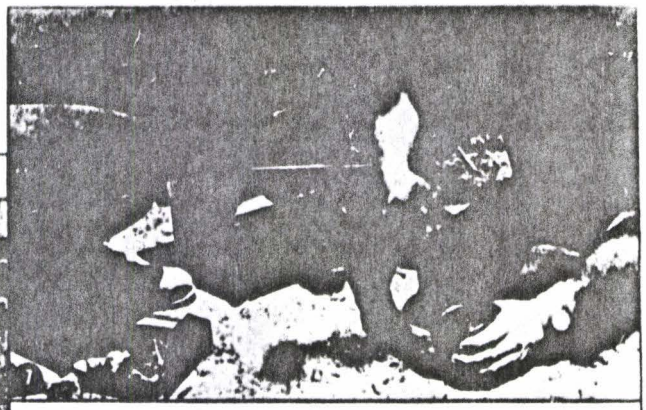
1. Mike Baker figured that, with a little more oomph, he could push his Jeep's front end over a rock wall in the trail. After three tries, he was content to winch over.

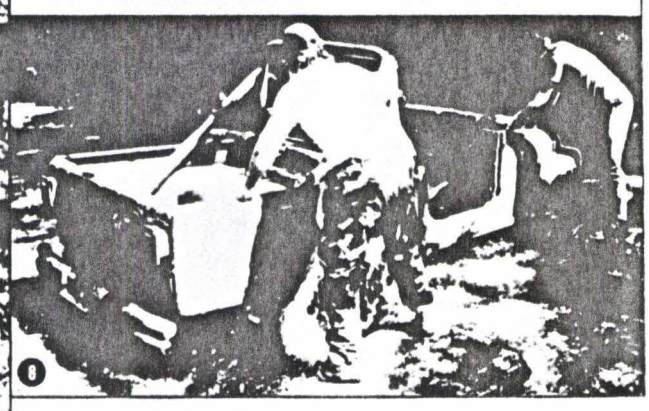
2. Like many others, Tad Simpson wedged himself against a tree as he tried to negotiate a narrow space. The outcome: tree fine; Jeep modified.

3. On the Smoky Trek, the trail continually climbs, descends, twists and turns. The Cherokee National Forest has something to offer every off-roader, regardless of vehicle type or driving experience.

4. Many different makes and models of 4x4s join the Great Lakes Four Wheel Drive Association for the annual Smoky Trek. All must be prepared for the unexpected. Here, Forest Kuhn is either checking his frontend damage or praying for a miracle to get his truck off the mountain.







cle, the caravan resumes its travels through the mountains. Stops are also made to repair trail damage, and there too everyone pitches in to get the work done. Finally, the trails wind back down to the main road—a combination of gravel and pavement—and the groups retire to their weekend abodes to rest and prepare for the following day.

With the rain gone and the terrain drying nicely, Saturday morning found some of the off-roaders searching out the more treacherous trails. The trail heads are marked and the Cherokee National Forest rangers can provide instructions on how to find them. Once past the markers, however, the group is on its own, with no maps available. Many of the trails lead to dead ends, while others become tangled mazes that can be confusing, frustrating and time consuming. The buddy system is always employed, since there are many situations that require two vehicles working together to overcome an obstacle.

As with any run of this type, the off-roader should know his vehicle thoroughly and have it in tip-top shape. He should carry the spare parts that he knows he will likely need, including tires, belts, fluids, filters and the tools required to replace such items. In addition, it is wise to pack a jack, tow straps, a shovel and a fairly heavy sledgeham-

mer. The Saturday groups used all of these tools as well as their own guile to traverse the many water crossings, rock faces and boulders that are strewn throughout the Cherokee trails. As the groups negotiated rocky staircases and steep inclines, sheer horsepower became an obvious advantage, but winches were often called into play as well.

Eventually, everyone regrouped at the Spivey Cove Campground for a party Saturday evening—though those who had chosen the most difficult run didn't return until well after the sun had set. A feast of thick, juicy hamburgers with all the trimmings was spiced with yarns of the weekend's adventures. The evening was capped by the annual awards presentation, with the participants receiving notoriety in such categories as Shade Tree Mechanic, Hard Luck, Best Dressed and Dirtiest.

The 12th annual Smoky Trek, hosted by the Great Lakes Four Wheel Drive Association, will be held May 2, 3 and 4. All serious off-roaders are welcome to attend, and reservations or more information can be obtained by writing to the Smoky Trek, c/o Tom Hoskin, 2523 Elmwood, Ann Arbor, MI 48104, or calling 313/971-9713. 4WO

5. Rick Taepke, one of the event's trailmasters, challenges a rock face in his '84 CJ. This spot was one of the few that the fiesty little Jeep couldn't overcome.

6. Tom Sheldon's four-wheel-drive VW Bug—a vehicle of mixed genealogy—attacked every obstacle with gusto. The highly varied terrain gave Tom more than his share of fun and glory.

7. A good supply of spare parts and tools is required for th more difficult Smoky Trek runs. Straightening an oil filter that had been banged up by rocks was one of the simpler tasks that had to be performed.

8. In an otherwise smooth stream crossing, Nancy Pieske o Michigan found the only untractable hole. After rocking herself out—with the help of some friendly manpower—she scrambled to higher ground with a new story to share.

UPPER TELLICO RIVER

TEN YEAR IMPLEMENTATION SCHEDULE

	FY 86		FY 87		FY 88		FY 89		FY 90		FY 91		FY 92	
	UNITS	$	UNITS	$	UNITS	$	UNITS	$	UNITS	$				
ADMINISTRATIVE														
1. Report to working group annual update & feedback on issues and concerns	1 Plan (D)	600		100		X		X		X		X		X
2. Administrative support	(D)	2986		1840		1840		1840		X		X		X
3. Forward recommendations to NCWRC	(SO)													
RECREATION														
4. Locate & mark open routes	22 Mi.	2130												
5. Construct & install entrace information boards and minimal signing	2	594												
6. Rehab one abused dispersed use site	0.3 Ac.	360												
7. Maintain route marking, signing, and information boards				450		450		250		250		X		X
8. Trail maintenance			5 Mi. (D) (V)	1250	6 Mi.	1500			10 Mi. (D) (V)	2500	6 Mi.	1500		
9. Trail construction Trail reconstruction					2.5 Mi. 3.5 Mi.	10500 3,700	1 Mi.	6000	3 Mi.	4500				
10. Cleanup/litter removal Archaeological survey	(D) (M) 4 Ac. (D)	1040 650		1040		1040		1040		X		X		
ROADS														
11. Complete TAU#	1 (S)													
12. Investigate alternative route around private land	.75 Mi. (S) (D)	380												
13. Road maintenance and drainage	16 Mi.	2900	9 Mi.	1629										
14. Road construction/ Bridge construction-Davis Creek	3.6 Mi. 2 Bridges	(SO) (SO)												
14a. Harden Stream Crossings	2 (D) (V) (S)	2400												

15. Timber road reconst./ construction Archaeological survey				Temp. 2.1 Mi (S) (D) 2 Ac. 350 (S) (D)				
WATERSHED/SOILS								
16. Complete watershed inventory	1 Plan 1100 (D)							
17. Soil & Water rehab. projects (from inventory - item 16)		11 Ac. (D) (V) 13,000	7.5 Ac. (D) (V) 9,000	12.5 Ac. 15,000	10 Ac. 12000	6 Ac. 7200		
18. Preliminary/temporary closure of unacceptable routes.	(D) (V) 980							
19. Special soils survey for anakeesta	(S) (D) 1100			(S) 600				
20. Design & implement water monitoring	1 Plan 1,360 (S)	1,100 (S) (D)	1,100	1,100	X	X		
21. Maintenance of completed rehab projects			11 Ac. 2,500 (D) (V)	18.5 Ac. (D) (V) 3,600	20 Ac. 4,000 (D) (V)	22.5 Ac. (D) (V) 4,400	16 Ac. 3,200 (D) (V)	
TIMBER								
22. Mark timber for sale			276 Ac. (D) (C-125)					
23. Timber sale				(C-125) (D)				
24. Site prep/reforestation							80 Ac. (D)	
LAW ENFORCEMENT								
25. Prepare and implement contact/partol/enforcement schedule	1 Plan 4,208 (D) (S)	4,028	3,260	3,260	X	X	X	
26. Annual coordination with NCWRC local officers and special projects scheduling	(D) 250	X	X	X	X	X	X	
WILDLIFE								

LEGEND

(D) - District Personnel
(V) - Volunteers
(M) - Manpower
(S.O.) - Supervisor's Office
(S) - Specialist
X - Continuing Project